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| 09/405,781      | 09/27/99    | BENDA                |                     |

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IM22/1113

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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1741

DATE MAILED: 11/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/405,781

Applicant(s)

Benda, George

Examiner

Thao Tran

Group Art Unit  
1741



☒ Responsive to communication(s) filed on Oct 13, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-15 and 21 is/are pending in the application

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-15 and 21 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2,3

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6-7 recite the limitation "said chimney" in line 2. There is insufficient antecedent basis for this limitation in the claim.

3. Claims 1-9, 15, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-2, 15, and 21 are indefinite due to the use of "whereby". It is unclear to the examiner as to what applicant is indicating. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

5. Claims 1, 3, 6-7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Goswami (US Pat. 5,835,840).

Goswami teaches a device for purifying air comprising: a reactor (system) comprising a photocatalyst; an ultraviolet light source, illuminating the photocatalyst; and a heater (heating coil) (see Figs. 1-3; col. 3-4, lines 62-27).

With respect to the air moving through the reactor by convection, it has been well settled within the skill in the art that the manner by which an apparatus is operated has been held insufficient to patentably distinct over prior art. See *In re Venner*, 120 USPQ 193, 194 (CCPA 1958).

In regards to claim 3, Goswami teaches the photocatalyst being titanium dioxide (see col. 4, lines 29-33).

In regards to claim 6, Goswami teaches a means for controlling humidity in the reactor (see Fig. 1; col. 5, lines 19-22).

In regards to claim 7, Goswami teaches a fibrous mass holding the photocatalyst (see col. 4, lines 28-41).

In regards to claim 9, Goswami teaches the ultraviolet source emitting light of wavelength shorter than 387 nm (see col. 1, lines 54-57).

6. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamanaka et al. (US Pat. 5,919,422).

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In regards to claims 1 and 10, Yamanaka teaches a device for purifying air, comprising a reactor (photocatalyzer) which comprises a photocatalyst, an ultraviolet light source, a heater, and an exit port (outlet port) (see abstract; Fig. 10; col. 21, lines 6-12; claims 1-3).

In regards to claims 3 and 11, Yamanaka teaches the photocatalyst being primarily titanium dioxide (see abstract).

In regards to claims 4-5 and 12-13, Yamanaka teaches that titanium dioxide is doped with platinum (see col. 35, lines 36-38).

In regards to claims 7-8, Yamanaka teaches that fiber glass is the fibrous mass holding the photocatalyst (see claims 1 and 7-8).

In regards to claims 9 and 13-14, Yamanaka teaches the ultraviolet light source emitting light of wavelength in the range of 360-400 nm which reads upon the instantly claimed ranges and also produces visible light (see col. 36, lines 16-33; claim 1).

### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 10-11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswami as applied to claim 1 above.

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Goswami is as set forth in claim 1 above and incorporated herein.

Goswami further teaches two electrical leads connecting the device to an electrical source (see col. 4, lines 18-22). Although Goswami is silent with respect to a pair of electrical prongs protruding from the device, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the electrical leads of Goswami for a pair of electrical prongs, because the use of electrical prongs would be functionally equivalent to that of electrical leads. See *In re Dailey*, 149 USPQ 47 (CCPA 1966); *In re Kuhle* 188 USPQ (CCPA 1975).

In regards to claim 10, the arguments are as presented in claims 1-2. Furthermore, Goswami teaches an exit port (outlet) at the top of the device (see Fig. 5; col. 5, lines 57-59; col. 6, lines 39-42).

In regards to claim 11, the arguments are as presented in claim 3.

In regards to claims 13-14, Goswami teaches the ultraviolet light source emitting light of wavelength in the range of 300- 400 nm (see col. 1, lines 54-57) which reads upon the instantly claimed ranges. Furthermore, it has been known that this range of wavelength encompasses visible light.

9. Claims 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka et al. as applied to claims 1 and 10 above.

Yamanaka is as set forth in claims 1 and 10 above and incorporated herein.

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Yamanaka teaches a light source which produces visible light and exhibits bright, vivid colors (see col. 36, lines 24-27). Although Yamanaka is silent with respect to an opening that allows the visible light to escape, one of ordinary skill in the art would have expected that a means would be inherently used to allow visible light to escape and exhibit its colors. See *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Napier* 34 USPQ2d 1782, 1784 (Fed. Cir. 1995); *In re Grasselli*, 218 USPQ 769, 775 (Fed. Cir. 1983).

With respect to the use of the device as a night light, it has been held within the skill in the art that function or intended use would play little patentable weight when an apparatus claim is being considered for its patentability. See *In re Danly*, 120 USPQ 528, 531 (CCPA 1959); *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

In regards to claim 21, in light of the specification, page 12, the examiner is taking a position in interpreting a chimney as a reactor. Thus, the arguments for claim 21 are as presented in claims 1, 9-10, and 14-15.

10. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswami as applied to claim 1 above, and further in view of Dimitrik (US Pat. 3,844,741).

Goswami is as set forth in claim 1 above and incorporated herein.

Goswami teaches two electrical leads connecting the device to an electrical source (see col. 4, lines 18-22). However, Goswami differs from the instant claims in that the reference does not teach a pair of electrical prongs protruding from the device, which can be directly plugged into an electrical outlet.

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Dimitrik teaches an air purifier having a plug to connect to a power source (see Fig. 3; col. 3, lines 10-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the plug of Dimitrik for the electrical leads of Goswami, depending upon user's preference and intended use, because a plug would be functionally equivalent to electrical leads. See *In re Dailey*, 149 USPQ 47 (CCPA 1966); *In re Kuhle* 188 USPQ (CCPA 1975).

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fujishima et al. (US Pat. 5,948,355); Wang (US Pat. 6,135,838).
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao Tran whose telephone number is (703) 306-5698. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathryn Gorgos, can be reached on (703) 308-3328. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.



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T.T.

November 9, 2000

*Kathryn Gars*  
Kathryn Gars  
11/9/2000